

Product Information

INFINAM® PA 6004 P**POLYAMIDE-12 POWDER FOR ADDITIVE MANUFACTURING PROCESSES**

INFINAM® PA 6004 P is a natural colored fine powder especially for the use in additive manufacturing. Our product is suitable for manufacturing of functional prototypes, manufacturing of individual units as well as serial parts. INFINAM® PA 6004 P is especially suitable for powder bed fusion technologies.

Features

- Powder for flame retardant 3D print parts
- Exploitable on common systems for powder-based additive manufacturing
- Easy-to-process
- High process stability
- Excellent powder flow properties
- Excellent mechanical properties
- Excellent surface resolution and feature detail
- Nice surface finish
- Good resistance against numerous chemicals

The features and properties presented are to be understood as typical and are intended for reference and comparison purposes only. Due to layer-wise construction and by variation of processing conditions the actual properties of components from additive processes will vary. Due to process-related deviations the user is responsible to ensure the characteristic values required for the respective use and to carry out additional application-related tests if necessary.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.INFINAM.COM

| Properties of 3D printed parts acc. ISO | dry / cond | Unit | Test Standard |
|---|-----------------|------|---------------|
| Tensile modulus flat X | 2500 / - | MPa | ISO 527 |
| Tensile modulus on-edge Y | 2500 / - | MPa | ISO 527 |
| Tensile modulus upright Z | 2300 / - | MPa | ISO 527 |
| Tensile strength flat X | 47 / - | MPa | ISO 527 |
| Tensile strength on-edge Y | 47 / - | MPa | ISO 527 |
| Tensile strength upright Z | 42 / - | MPa | ISO 527 |

| | | | |
|---------------------------------------|-------|---|---------|
| Nominal strain at break flat X, tB | 4 / - | % | ISO 527 |
| Nominal strain at break on-edge Y, tB | 4 / - | % | ISO 527 |
| Nominal strain at break upright Z, tB | 4 / - | % | ISO 527 |

| Thermal properties | dry / cond | Unit | Test Standard |
|--|------------|------|---------------|
| Melting temp., DSC 1st heating, powder | 187 / * | °C | ISO 11357 |

| Burning Behav. | dry / cond | Unit | Test Standard |
|-------------------------------|------------|-------|-----------------|
| UL Blue Card available | yes / * | - | - |
| Burning behav. at thickness h | V-0 / * | class | IEC 60695-11-10 |
| Thickness tested | 3.0 / * | mm | - |

| Powder properties | Value | Unit | Test Standard |
|----------------------|-------|------|----------------------------|
| Bulk density, powder | 520 | g/l | EN ISO 60 |
| Particle size, D(50) | 55 | µm | ISO 13320, DIN ISO 8130-13 |

| Sustainability | Value | Unit | Test Standard |
|---|------------------------------------|---------------------------|------------------|
| LCA name of certificate | INFINAM® PA 6004-P | | ISO 14040, 14044 |
| LCA certifier | TÜV Rheinland | - | ISO 14040, 14044 |
| Blue water consumption | 22.3 | kg | ISO 14040, 14044 |
| Global Warming Potential incl. bio. C incl. LUC | 4.9 | kg CO ₂ eq./kg | ISO 14040, 14044 |
| Global Warming Potential excl. bio. C incl. LUC | 4.9 | kg CO ₂ eq./kg | ISO 14040, 14044 |
| Land use (ReCiPe 2016) | 0.1 | Annual crop eq. y | ISO 14040, 14044 |
| GWP savings as compared to 2023 reference | -3.1 | kg CO ₂ eq./kg | ISO 14040, 14044 |

Characteristics

Key Features, Industrial Sector

Sustainable, Industry and Engineering, 3D Printing

Key Features, Additives

Flame retardant

Key Features, Sustainability

RFP (reduced foot print)

Key Features, Processing

3D Printing

Key Features, Delivery form

Powder

Processing

Additive manufacturing, Powder bed fusion

Special Characteristics

Halogen-free, Semi-crystalline

Additives

Flame retardant

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